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# 1. Introduction

In December of 1991 The Corradino Group completed the *I-75 Corridor Study for Northern Oakland County*. The project report was used as a blueprint for regional roadway development in subsequent years. Since the 1991 study, considerable progress has been made in meeting transportation needs by the Road Commission for Oakland County, the Michigan Department of Transportation (MDOT), and local jurisdictions and agencies, such as the Traffic Improvement Association in Oakland County.

The 1991 study was stimulated in part by anticipated development including the Great Lakes Crossing Mall, which is now open. Development throughout Oakland County has made it evident that the approach applied to northern Oakland County in the 1991 Study needs to be extended to all of the County.

When I-75 was originally planned, it was laid out in a stair-step manner following section lines and property lines, to minimize impacts to the development that existed at that time (Figure 1-1). As a result, I-75 is a diagonal route paralleling the basic alignment of Woodward Avenue (M-1) and Dixie Highway (U.S.-24 in portions). Because of its northwest/southeast orientation, the I-75 corridor is one that is difficult to duplicate with parallel facilities. The north/south and east/west roadway grid system

has a difficult time serving travel needs and providing direct access between development nodes that have been created along the diagonal of I-75.

This geographic reality forces I-75 to act, in some measure, as a local roadway. It is used by many Oakland County residents and workers for local trips, as well as a through interstate route.

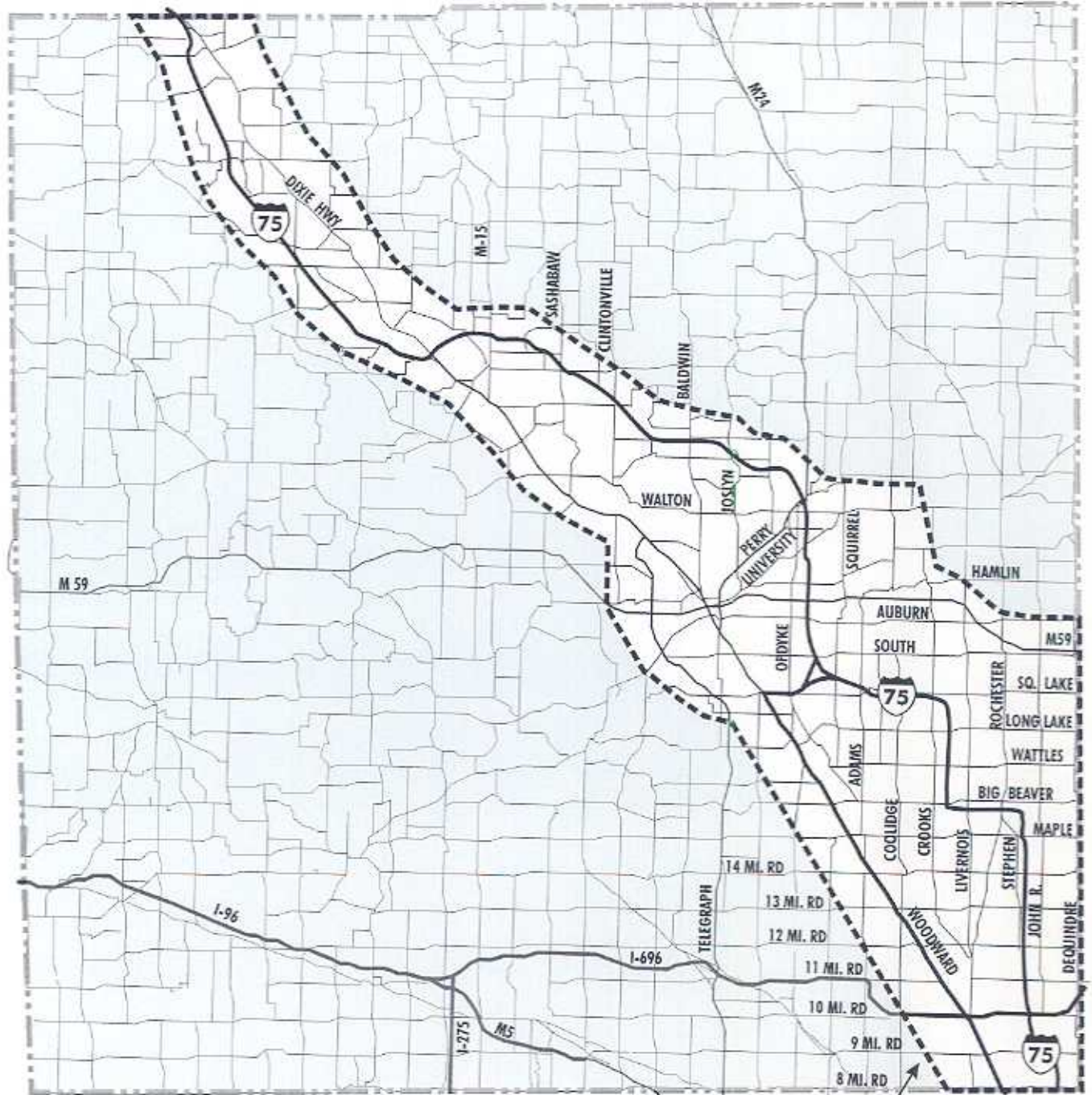
## 1.1 Purpose

The purpose of the I-75 Corridor Study in Oakland County is to work with local officials, the public, MDOT, and a Steering Committee (made up of local and state government representatives) to devise an overall strategy of improvements to I-75 and to the transportation network complementing it in Oakland County. This strategy will provide a balance of travel service and cost responsibilities.

The sponsorship of the study by the Michigan Department of Transportation, SEMCOG (the Southeast Michigan Council of Governments), the Road Commission for Oakland County, and the Transportation Improvement Association of Oakland County reflects the joint concern of those responsible for transportation in Oakland County to reach consensus on a set of solutions that will benefit all.



# OAKLAND COUNTY



STUDY AREA BOUNDARY



Figure 1-1  
Location Map

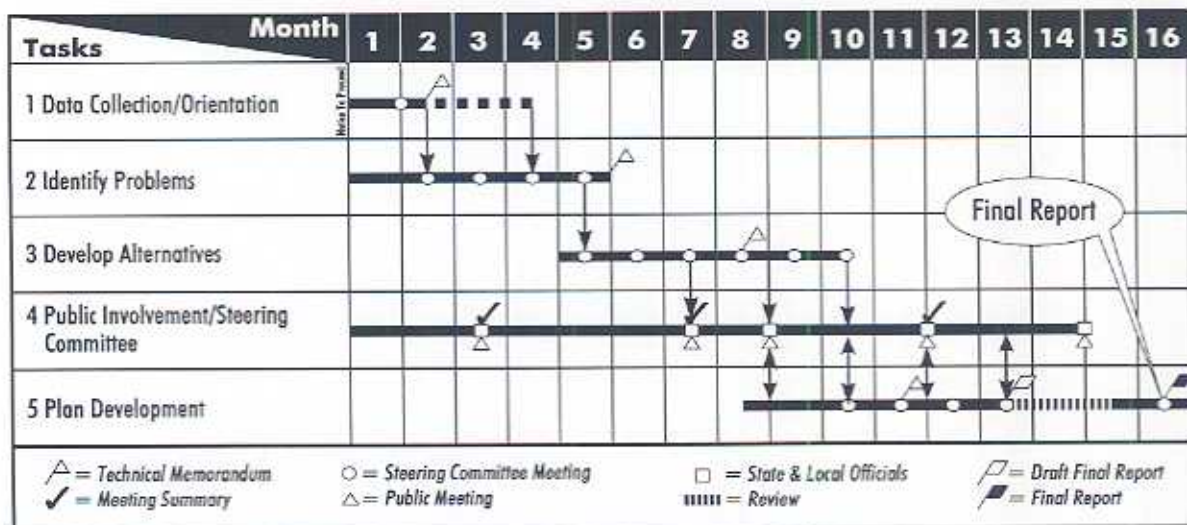
## 1.2 Framework of the Analysis

This is the final report of the I-75 Corridor Study in Oakland County (Figure 1-2). It presents the transportation plan which reflects comments made as a result of input to the draft plan including that received from the public at open house sessions held in September 2000. The plan was prepared by:

1. Adding one additional lane to I-75 where it is needed to provide four through-lanes in all sections. This lane will be available to all vehicles.
2. Assessing by cost and other impacts which I-75 interchanges can be reconfigured.
3. Overlaying SCATS throughout the corridor.
4. Carefully determining which arterials will be improved and by how much (lanes and miles).

In the plan's review, it was decided based on MDOT and public input to drop the proposal for a new Clintonville interchange. This project will require more and stronger local support before it is advanced further. In the meantime, the transportation network in the area includes paved Maybee and Waldon Roads. Another change from the draft plan is the elimination of the improvement of Thirteen-Mile Road from Stephenson Highway to Campbell; that section is now fixed. The Andersonville Road project has also been dropped.

Figure 1-2  
I-75 Revised Project Schedule





## 2. Corridor Transportation Plan

### 2.1 I-75 Improvements

Tests of alternative roadway improvements in the corridor have illustrated that widening I-75 by adding one lane in each direction where it is needed to provide four through-lanes is the single most productive element in addressing congestion with few impacts. Additional widening would be associated with takings of such large numbers of residences and businesses as to make such expansion of I-75 impractical. As this plan goes forward, other alternatives to further widening I-75 need to be developed in concert with local land management initiatives to address transportation demand fostered by increased development throughout the I-75 corridor.

#### Addition of One Lane per Direction on Mainline

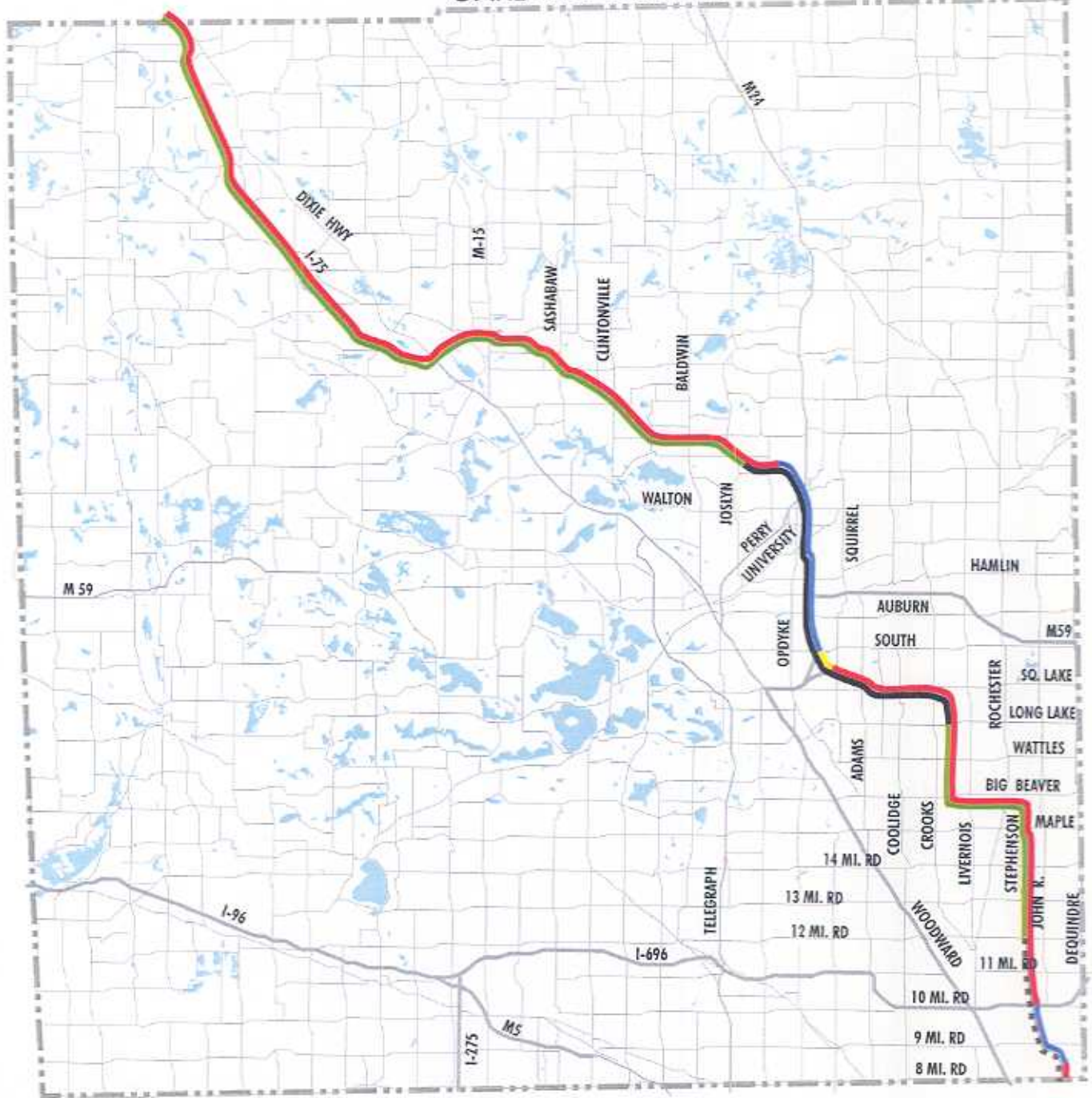
Figure 2-1 shows the existing number of lanes along I-75 in Oakland County. The section of the roadway in the south portion of the corridor is depressed, meaning the profile of the roadway is below the elevation of the surrounding land (Figure 2-2). Crossroads in this section of the alignment are "at-grade". Here, the freeway can be described as being in a "cut" section. Addition of a fourth through lane in depressed sections will occur by cutting into the side slopes of the depressed roadway (Figures 2-4a through 2-4g). In the area around Woodward Heights the right-of-way available for widening is limited. A number of potential relocation

areas have been shown (Figure 2-4e) but they can be avoided if the service drives are reconstructed over the freeway. The cost estimate accounts for this type solution.

Just south of Twelve Mile Road, the freeway rises from its depressed section to an at-grade elevation, which persists throughout the remainder of Oakland County. I-75 passes over some crossroads through the section and under others. Figure 2-3 shows a section of the portion of I-75 that is essentially at-grade and where there is an existing median separating the north- and southbound lanes. Addition of a fourth through-lane here is proposed to be made in this median section. The shoulder width on the inside will have to be maintained to serve the function of emergency refuge. A center concrete barrier will be installed. The top of Figure 2-4g illustrates the proposed layout of the lane addition from just south of Twelve-Mile Road to the northern county line.

It is noted that this proposed additional lane would be available to all vehicles. But, it is also noteworthy that the section of I-75 from the Square Lake interchange to east of Joslyn now has four through lanes. NO reconstruction/ widening is called for there.

# OAKLAND COUNTY



## LEGEND

- = 4 Lane (each way)
- = 3 Lane (each way)
- = 2 Lane north, 3 lane south
- = Grass Median
- = Barrier Median
- ..... = Depressed Fwy



Figure 2-1  
I-75 Existing Number of Lanes,  
Median Condition & Depressed Area

SOURCE: The Corradino Group

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## Typical Sections of I-75



Figure 2-2  
I-75 in Depressed Section



Figure 2-3  
I-75 in At-Grade Freeway Section









Figure 2-4b  
 Proposed I-75 Widening  
 Grant to 9 Mile





Figure 2-4c  
Proposed I-75 Widening  
9 Mile to Browning













Figure 2-4f  
Proposed I-75 Widening  
N. of Brockton to Gardenia







### Interchange Reconstruction

To further improve the performance of I-75, changes are proposed to the configurations of the following interchanges<sup>1</sup>:

- I-696
- Twelve Mile
- Fourteen Mile
- Rochester Road
- Long Lake/Crooks Roads
- Sashabow Road
- Dixie Highway.

Of note, where bridges are rebuilt at these interchanges or elsewhere along I-75, the cross roads would be designed to accommodate pedestrian and bicycle traffic.

### I-696 Interchange

The I-696 interchange with I-75 will be improved. The eastbound I-696 to northbound I-75 ramp, which is now a single lane, will flair out to two lanes wide (Figure 2-5). This ramp widening requires an additional taper north of the interchange to allow the second lane to merge and then the lane to drop. The additional ramp lane will cause the end of the merge area to be pushed north approximately 1,260 feet from its present position. Alternatively, the right-most lane in the new northbound I-75 configuration will become an auxiliary lane, which will end as the off-ramp to Eleven Mile Road. This would be an effective lane drop. The lane addition on the eastbound to northbound ramp, together with the addition of the lane on the mainline of I-75, will necessitate the acquisition of additional right-of-way likely taking eight residential units and a church.

### Twelve- and Fourteen-Mile Road Interchanges

The changes proposed at Twelve-Mile and Fourteen-Mile Roads are for rebuilding the I-75 interchanges in a single-point configuration (Figures 2-6, 2-7 and 2-8). This design brings all ramp ends together at a single point and provides for a three-phase signal operation at the intersection (three green phases, one for each of three movements). The three phases control: 1) left turns from the ramp ends; 2) left turns to the entrance ramps; and, 3) the through movement of the cross street. It is noteworthy that this concept is new to Michigan but has proven successful in a number of other states. It is also worthy to note that the single-point urban interchange (SPUI) proposed at Twelve- and Fourteen-Mile Roads is so compact that 34 acres of land now covered by the interchanges could be freed up. Inquiry is pending on the possibility of selling off that acreage with use of the proceeds to pay for implementing part of the cost of the I-75 Corridor Transportation Plan.

### Rochester Road Interchange

The improvements to the interchanges at Rochester and Sashabow Roads as well as Dixie Highway are reconfigurations of elements of these interchanges. At Rochester Road, the principal difficulty today is caused by vehicles backing up onto the freeway from the northbound exit as Rochester Road has an insufficient capacity to take all the vehicles trying to exit from the freeway. The reconstruction of Rochester Road, as discussed later in this plan, will alleviate this condition. Nevertheless, in the near term, it will be productive to lengthen the northbound double exit ramp to Rochester Road by having it begin earlier and segregating

<sup>1</sup>The I-75 interchange with M-59 is the subject of another study. Its results will be handled separately.









Artist's Rendition



Actual Interchange in Louisville, Kentucky

Figure 2-6  
Single Point  
Urban Interchange (SPUI)

SOURCE: U.S.G.S. and Utah Department of Transportation

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Figure 2-7  
Proposed 12 Mile Road  
Interchange